



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,975	06/27/2005	Masami Nishikawa	42479-8600	5651

21611 7590 03/28/2008
SNELL & WILMER LLP (OC)
600 ANTON BOULEVARD
SUITE 1400
COSTA MESA, CA 92626

EXAMINER

KRISHNAMURTHY, RAMESH

ART UNIT	PAPER NUMBER
----------	--------------

3753

MAIL DATE	DELIVERY MODE
-----------	---------------

03/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/507,975

Applicant(s)

NISHIKAWA ET AL.

Examiner

Ramesh Krishnamurthy

Art Unit

3753

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15 - 19 and 22 - 35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15 - 19 and 22 - 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

This office action is responsive to communications filed February 13, 2008.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 13, 2008 has been entered.

Claims 15 – 19 and 22 – 35 are pending.

2. Applicant is advised that should claim 22 be found allowable, claims 24 and 25 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

3. Applicant is advised that should claim 23 be found allowable, claims 26 and 27 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

4.

Art Unit: 3753

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 15 - 17, 19 - 30 and 32 - 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldbusser (US 6,138,708) in view of Takahiro (JP 03-031913).

Waldbusser discloses an arrangement in a semiconductor production assembly utilizing a source of fluid, a mass flow controller that can be installed as a unitary component, comprising: a housing block member having a fluid passageway connected to the source of fluid (Fig. 2); and a mass flow controller module (20, 21) mounted on the housing block including, from an upstream position in a consecutive and adjacent arrangement, a pressure control valve unit (22), a flow rate sensor unit (40, 42, 44, 46) and a flow rate control valve unit (48, 50), said flow rate sensor unit providing a flow rate signal; and a control means (26) for providing a first control signal to said pressure

control valve unit (22) for providing a second control signal to said flow rate control valve in response to said flow rate signal to avoid an effect on the flow rate in the fluid passageway due to a pressure fluctuation at the outlet of the mass flow controller.

The patent to Waldbusser discloses the claimed invention with the exception of explicitly disclosing a pressure sensor unit that is coupled to the pressure controller.

Takahiro discloses a flow control arrangement wherein a pressure sensor unit (11) feeds the sensed pressure to a pressure control valve for the purpose of providing a controlling the pressure of the fluid that is being fed downstream thereof to a mass flow control unit, thereby minimizing the effects of any pressure fluctuations at the inlet.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in Waldbusser a pressure sensor unit that is coupled to the pressure controller for the purpose of minimizing the effects of any fluctuations of inlet pressure on the flow control valve, as evident from Takahiro.

The provision of an additional pressure sensor in the combination of Waldbusser and Takahiro, as set forth above, is a duplication of an essential working part which the courts have held to be obvious to one of ordinary skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Waldbusser discloses (Fig. 2 & Col. 3, lines 1 - 13) that it is known in the art to provide the various components in a single manifold block. In regard to specific arrangement (as recited in claims 22 - 28, for example) of the various gas flow components such as pressure sensor, pressure control valve as being disposed either one side or the other of the housing block, in this office action such placements are

being regarded as mere design expedients over those features disclosed in the combination set forth above in that such placements neither provide any new and/or unexpected results nor solve any stated problem.

8. Claims 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Waldbusser and Takahiro as applied to claims 15 - 17, 19 - 30, and 32 - 34 above, and further in view of Porter et al. (US 2002/0124691).

The combination of Waldbusser and Takahiro discloses the claimed invention with the exception of explicitly disclosing the flow control valve to have a diaphragm member.

Porter et al. discloses a manifold fluid delivery system comprising a flow sensor (56) and a flow control valve (54) comprising a diaphragm for the purpose of providing a suitable valving interface to the fluid flow therethrough.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the combination of Waldbusser and Takahiro a flow control valve (54) comprising a diaphragm for the purpose of providing a suitable valving interface to the fluid flow therethrough. It should be noted that the mass flow controller in Waldbusser is a conventional mass flow Controller (20) and as such would include all known types of mass flow controller including the one with a diaphragm as taught in Porter et al. Additionally, Waldbusser discloses (Col. 4, lines 22 – 26) that the pressure regulator could be any conventional pressure regulator which here is taken to include those regulators that have a diaphragm.

Art Unit: 3753

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Waldbusser and Takahiro as applied to claims 15 - 17, 19 - 30, 32 - 34 above, and further in view of Tsourides (US 2002/0038673).

The combination of Waldbusser and Takahiro discloses the claimed invention with the exception of explicitly disclosing a filter member mounted upstream of the pressure control valve.

Tsourides discloses an arrangement (see Fig. 5C for example) wherein a filter (33) is disposed upstream of the pressure control valve (14) for the purpose of providing a clean supply of the fluid to the valve.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the combination of Waldbusser and Takahiro, a filter member mounted upstream of the pressure control valve for the purpose of providing a clean supply of the fluid to the valve, as evident from Tsourides.

Response to Arguments

10. Applicant's arguments with respect to claims 15 - 19 and 22 - 35 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (571) 272 - 4914. The examiner can normally be reached on Monday - Friday from 10:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson, can be reached on (571) 272 - 4887. The fax phone number for the organization where this application or proceeding is assigned is (571) 273 - 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 3753

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ramesh Krishnamurthy/
Primary Examiner, Art Unit 3753